

REMARKS

The acknowledgment of Applicants' claim for foreign priority under 35 U.S.C. §119 and the receipt of the priority document is noted with appreciation.

The specification has been amended to correct minor errors and to delete a superfluous paragraph on page 3. No new matter has been added.

Claims 1 to 6 remain in the application. By this amendment claims 1 to 6 have been amended, and claims 7 to 9 have been canceled.

The disclosed and claimed invention addresses a specific problem in Workflow-Management-Systems (WFMS). WFMS is a new area of technology which controls which piece of work of a network of pieces of work will be performed by whom and which resources are exploited for this work. The product "IBM MQSeries Workflow" represents a typical modern, sophisticated, and powerful workflow management system. Business processes often consist of parts that are time critical, and others which are not. One way to control the processing behavior of a set of activities in terms of workload balancing is via the support of a workload management system (WLMS); however, such a solution is limited to environments which implement highly sophisticated operating systems like IBM's MVS system. An alternative approach is to specify execution priorities for individual activities, but this approach has the significant disadvantage that each instantiation of such a process model is executed by the WFMS with identical execution priority characteristics.

The disclosed and claimed invention provides a more flexible approach for performance improved processing of time critical parts of a process model without the need of a WLMS and, therefore, without the requirement of a highly sophisticated operating system. According to the claimed invention, the workload management functions are taken over by the WFMS independent of a WLMS. The invention is a computerized method of managing workload within WFMS executable by the WFMS on a computer system. The WFMS comprises a process-model which comprises one or more activities being the nodes of an arbitrary graph, directed edges of said graph defining a potential control-flow within the process-model. The method by analyzing the process-model to determine if a

priority-execution-specification is assigned to an activity comprising at least one Boolean-predicate and a priority-level. If the determination is affirmative, the Boolean-predicate is evaluated using a variable-value not comprised in the process-model but the variable-value being comprised in a context of an instance of said process-model. If said Boolean-predicate evaluates to TRUE, execution of the activity is launched in said activity's execution-environment. A key feature of the claimed invention is that the WFMS sets its own execution-priority for the WFMS-internal processing relating to the activity with respect to the WFMS's execution-environment to the execution-priority specified according to the priority-level. This allows for the flexibility described above.

Claims 1–3 and 6–9 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,826,239 to Du et al. Claims 4 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over the patent to Du et al. in view of U.S. Patent No. 6,130,757 to Yoshida et al. Claims 6–9 have been canceled. Claim 1 has been amended to include that part of claim 5 which relates to the WFMS setting its own execution-priority for the WFMS-internal processing. Therefore, the following arguments are presented in response to the combination of Du et al. and Yoshida et al.

Du et al. disclose a distributed workflow management system (WFMS) which manages plural resources to perform a workflow process that includes multiple process activities. The resources are grouped by a local resource manager (LRM) which maintains dynamic status of each resource, such as availability and load, as well as their roles and addresses. A global resource manager (GRM) stores resource data only about the groups. The WFMS invokes the GRM, requesting a specified resource activity. The GRM checks the stored capabilities and status among the resource groups, selects the resource group capable of the specified activity and available, and forwards the request to the LRM for the selected group. The LRM selects one of the resources in the group to perform the specified activity and assigns the activity to that resource.

The Examiner recognizes that Du et al. do not teach that the Boolean-predicate is a variable value, but concludes that this is implicit in the Du et al. system. Applicants respectfully disagree with the Examiner. The Examiner also

recognizes that Du et al. do not teach that if the Boolean-predicate evaluates to TRUE, the WFMS sets its own execution-priority for the WFMS-internal processing. For this latter feature, the Examiner relies on Yoshida et al., citing col. 2, line 67, to col. 3, line 10. The cited passage is reproduced below:

“The second object is achieved by a server apparatus, connected to a plurality of client apparatuses in a network, for executing a job requested by the plurality of client apparatuses, the server apparatus comprising: a job management unit for managing jobs requested by the plurality of client apparatuses by assigning priorities to the jobs each time a job is requested; and a job controlling unit for searching a job having a highest priority at intervals and executing the job.

“With such a construction, the priorities are automatically assigned to the jobs each time a job is requested, and a job having the highest priority is executed immediately.”

The foregoing does not, as the Examiner suggests, describe a WFMS in which the “WFMS sets its own execution-priority for the WFMS-internal processing relating to said one activity with respect to the WFMS’s execution-environment to the execution-priority specified according to said priority-level”, as specifically recited in claim 1 as amended. What Yoshida et al. disclose is a client-server system in the form of an office automation system comprising copying machines, image scanners, personal computers, and facsimile machines. In that context, and continuing the quote at col. 3, lines 10–17, it will be better understood what Yoshida et al. mean as to priority levels:

“That is, interrupt jobs are automatically executed without manual operations by the operator. The priorities of the jobs are checked as certain intervals. Therefore, a job may be replaced by another job having the highest priority after a certain interval and jobs to be executed change based on the priorities, achieving optimum processing by improving the interrupt handling process.”

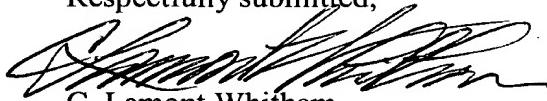
In other words, what Yoshida et al. are doing is addressing a specific problem, i.e., interrupt handling, in office automation systems. There is no suggestion in Yoshida et al. or, for that matter, in the combination of Du et al. with Yoshida et al. of making a WFMS independent of the availability of a workload load management system (WLMS), as is accomplished by the disclosed and claimed invention.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1–6 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to IBM/Yorktown Attorney's Deposit Account No. 50-0510.

Respectfully submitted,



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